Sequence Listing

<110> Gao,Wei-Qiang
Polakis,Paul
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Smith,Victoria
Soriano,Robert
Williams,P.Mickey
Wu,Thomas D.
Zhang,Zemin

<120> COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND TREATMENT OF TUMOR

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accctggtgg agcccccaga accatgtgcc gagcccgctg cttttggaga 250

cacgcttcac atacactaca cgggaagctt ggtagatgga cgtattattg 300

acacctccct gaccagagac cctctggtta tagaacttgg ccaaaagcag 350

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aaaaaaaa 1658

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Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu
35 40 45

Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu
50 55 60

His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp
65 70 75

Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys
80 85 90

Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val
95 100 105

Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly
110 115 120

Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln
125 130 135

Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu
140 145 150

Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val
155 160 165

Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala
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Asn Lys Ser Lys Lys Lys
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Arg Arg Thr Ala His Val Gly Thr Asn Ile Leu Thr Ala Val Ser
35 40 45

Tyr Leu Lys Gly Leu Trp Met Glu Cys Val Trp His Ser Thr Gly
50 55 60

Ile Tyr Gln Cys Gln Ile Tyr Arg Ser Leu Leu Ala Leu Pro Gln
65 70 75

Asp Leu Gln Ala Ala Arg Ala Leu Met Val Ile Ser Cys Leu Leu
80 85 90

Ser Gly Ile Ala Cys Ala Cys Ala Val Ile Gly Met Lys Cys Thr
95 100 105

Arg Cys Ala Lys Gly Thr Pro Ala Lys Thr Thr Phe Ala Ile Leu
110 115 120

Gly Gly Thr Leu Phe Ile Leu Ala Gly Leu Leu Cys Met Val Ala

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Val Ser Trp Thr Thr Asn Asp Val Val Gln Asn Phe Tyr Asn Pro
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Leu Gly Phe Ile Ser Ser Ser Leu Ser Leu Ile Gly Gly Thr Leu
                170                 175                 180

Leu Cys Leu Ser Cys Gln Asp Glu Ala Pro Tyr Arg Pro Tyr Gln
                185                 190                 195

Ala Pro Pro Arg Ala Thr Thr Thr Thr Ala Asn Thr Ala Pro Ala
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Tyr Gln Pro Pro Ala Ala Tyr Lys Asp Asn Arg Ala Pro Ser Val
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 Ile Trp Phe Pro Glu Glu Lys Pro Leu Pro Thr Ala Phe Leu Val
                35                  40                  45

 Asp Thr Ser Glu Glu Ala Leu Leu Leu Pro Asp Trp Leu Lys Leu
                50                  55                  60

 Arg Met Ile Arg Ser Glu Val Leu Arg Leu Val Asp Ala Ala Leu
                65                  70                  75

 Gln Asp Leu Glu Pro Gln Gln Leu Leu Leu Phe Val Gln Ser Phe
                80                  85                  90

 Gly Ile Pro Val Ser Ser Met Ser Lys Leu Leu Gln Phe Leu Asp
                95                 100                 105

 Gln Ala Val Ala His Asp Pro Gln Thr Leu Glu Gln Asn Ile Met
                110                 115                 120

 Asp Lys Asn Tyr Met Ala His Leu Val Glu Val Gln His Glu Arg
                125                 130                 135

 Gly Ala Ser Gly Gly Gln Thr Phe His Ser Leu Leu Thr Ala Ser
                140                 145                 150
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Leu Pro Pro Arg Arg Asp Ser Thr Glu Ala Pro Lys Pro Lys Ser
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Ser Pro Glu Gln Pro Ile Gly Gln Gly Arg Ile Arg Val Gly Thr
170 175 180

Gln Leu Arg Val Leu Gly Pro Glu Asp Asp Leu Ala Gly Met Phe
185 190 195

Leu Gln Ile Phe Pro Leu Ser Pro Asp Pro Arg Trp Gln Ser Ser
200 205 210

Ser Pro Arg Pro Val Ala Leu Ala Leu Gln Gln Ala Leu Gly Gln
215 220 225

Glu Leu Ala Arg Val Val Gln Gly Ser Pro Glu Val Pro Gly Ile
230 235 240

Thr Val Arg Val Leu Gln Ala Leu Ala Thr Leu Leu Ser Ser Pro
245 250 255

His Gly Gly Ala Leu Val Met Ser Met His Arg Ser His Phe Leu
260 265 270

Ala Cys Pro Leu Leu Arg Gln Leu Cys Gln Tyr Gln Arg Cys Val
275 280 285

Pro Gln Asp Thr Gly Phe Ser Ser Leu Phe Leu Lys Val Leu Leu
290 295 300

Gln Met Leu Gln Trp Leu Asp Ser Pro Gly Val Glu Gly Gly Pro
305 310 315

Leu Arg Ala Gln Leu Arg Met Leu Ala Ser Gln Ala Ser Ala Gly
320 325 330

Arg Arg Leu Ser Asp Val Arg Gly Gly Leu Leu Arg Leu Ala Glu
335 340 345

Ala Leu Ala Phe Arg Gln Asp Leu Glu Val Val Ser Ser Thr Val
350 355 360

Arg Ala Val Ile Ala Thr Leu Arg Ser Gly Glu Gln Cys Ser Val
365 370 375

Glu Pro Asp Leu Ile Ser Lys Val Leu Gln Gly Leu Ile Glu Val
380 385 390

Arg Ser Pro His Leu Glu Glu Leu Leu Thr Ala Phe Phe Ser Ala
395 400 405

Thr Ala Asp Ala Ala Ser Pro Phe Pro Ala Cys Lys Pro Val Val
410 415 420

Val Val Ser Ser Leu Leu Leu Gln Glu Glu Glu Pro Leu Ala Gly
425 430 435

Gly Lys Pro Gly Ala Asp Gly Gly Ser Leu Glu Ala Val Arg Leu

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Gly Pro Ser Ser Gly Leu Leu Val Asp Trp Leu Glu Met Leu Asp
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Pro Glu Val Val Ser Ser Cys Pro Asp Leu Gln Leu Arg Leu Leu
                470                 475                 480

Phe Ser Arg Arg Lys Gly Lys Gly Gln Ala Gln Val Pro Ser Phe
                485                 490                 495

Arg Pro Tyr Leu Leu Thr Leu Phe Thr His Gln Ser Ser Trp Pro
                500                 505                 510

Thr Leu His Gln Cys Ile Arg Val Leu Leu Gly Lys Ser Arg Glu
                515                 520                 525

Gln Arg Phe Asp Pro Ser Ala Ser Leu Asp Phe Leu Trp Ala Cys
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Ile His Val Pro Arg Ile Trp Gln Gly Arg Asp Gln Arg Thr Pro
                545                 550                 555

Gln Lys Arg Arg Glu Glu Leu Val Leu Arg Val Gln Gly Pro Glu
                560                 565                 570

Leu Ile Ser Leu Val Glu Leu Ile Leu Ala Glu Ala Glu Thr Arg
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Ser Gln Asp Gly Asp Thr Ala Ala Cys Ser Leu Ile Gln Ala Arg
                590                 595                 600

Leu Pro Leu Leu Leu Ser Cys Cys Cys Gly Asp Asp Glu Ser Val
                605                 610                 615

Arg Lys Val Thr Glu His Leu Ser Gly Cys Ile Gln Gln Trp Gly
                620                 625                 630

Asp Ser Val Leu Gly Arg Arg Cys Arg Asp Leu Leu Leu Gln Leu
                635                 640                 645

Tyr Leu Gln Arg Pro Glu Leu Arg Val Pro Val Pro Glu Val Leu
                650                 655                 660

Leu His Ser Glu Gly Ala Ala Ser Ser Ser Val Cys Lys Leu Asp
                665                 670                 675

Gly Leu Ile His Arg Phe Ile Thr Leu Leu Ala Asp Thr Ser Asp
                680                 685                 690

Ser Arg Ala Leu Glu Asn Arg Gly Ala Asp Ala Ser Met Ala Cys
                695                 700                 705

Arg Lys Leu Ala Val Ala His Pro Leu Leu Leu Leu Arg His Leu
                710                 715                 720

Pro Met Ile Ala Ala Leu Leu His Gly Arg Thr His Leu Asn Phe
                725                 730                 735
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Gln Glu Phe Arg Gln Gln Asn His Leu Ser Cys Phe Leu His Val
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Leu Gly Leu Leu Glu Leu Leu Gln Pro His Val Phe Arg Ser Glu
                755                 760                 765

His Gln Gly Ala Leu Trp Asp Cys Leu Leu Ser Phe Ile Arg Leu
                770                 775                 780

Leu Leu Asn Tyr Arg Lys Ser Ser Arg His Leu Ala Ala Phe Ile
                785                 790                 795

Asn Lys Phe Val Gln Phe Ile His Lys Tyr Ile Thr Tyr Asn Ala
                800                 805                 810

Pro Ala Ala Ile Ser Phe Leu Gln Lys His Ala Asp Pro Leu His
                815                 820                 825

Asp Leu Ser Phe Asp Asn Ser Asp Leu Val Met Leu Lys Ser Leu
                830                 835                 840

Leu Ala Gly Leu Ser Leu Pro Ser Arg Asp Asp Arg Thr Asp Arg
                845                 850                 855

Gly Leu Asp Glu Glu Gly Glu Glu Glu Ser Ser Ala Gly Ser Leu
                860                 865                 870

Pro Leu Val Ser Val Ser Leu Phe Thr Pro Leu Thr Ala Ala Glu
                875                 880                 885

Met Ala Pro Tyr Met Lys Arg Leu Ser Arg Gly Gln Thr Val Glu
                890                 895                 900

Asp Leu Leu Glu Val Leu Ser Asp Ile Asp Glu Met Ser Arg Arg
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Arg Pro Glu Ile Leu Ser Phe Phe Ser Thr Asn Leu Gln Arg Leu
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Met Ser Ser Ala Glu Glu Cys Cys Arg Asn Leu Ala Phe Ser Leu
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Ala Leu Arg Ser Met Gln Asn Ser Pro Ser Ile Ala Ala Ala Phe
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Leu Pro Thr Phe Met Tyr Cys Leu Gly Ser Gln Asp Phe Glu Val
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Val Gln Thr Ala Leu Arg Asn Leu Pro Glu Tyr Ala Leu Leu Cys
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Gln Glu His Ala Ala Val Leu Leu His Arg Ala Phe Leu Val Gly
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Arg Ile Leu His Met Glu Ala Val Met
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1025

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             20                  25                  30

Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala
             35                  40                  45

Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro
             50                  55                  60

Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly
             65                  70                  75

Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu
             80                  85                  90

Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala
             95                 100                 105

Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val
            110                 115                 120

Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser
            125                 130                 135

Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe
            140                 145                 150

Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr
            155                 160                 165

Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln Pro Thr Val Val
            170                 175                 180

Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser Glu Val Ser
            185                 190                 195

Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met Lys Val
            200                 205                 210

Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser Cys
            215                 220                 225

Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val
            230                 235                 240

Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn
            245                 250                 255
```

```
Ser Lys Ala Ser Leu Cys Val Ser Ser Phe Phe Ala Ile Ser Trp
                260                 265                 270

Ala Leu Leu Pro Leu Ser Pro Tyr Leu Met Leu Lys
                275                 280
```